



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,008	11/28/2001	Stephen R. Mooney	10559-552001/P12572	3876

8791 7590 07/15/2005

BLAKELY SOKOLOFF TAYLOR & ZAFMAN  
12400 WILSHIRE BOULEVARD  
SEVENTH FLOOR  
LOS ANGELES, CA 90025-1030

EXAMINER

HAMANN, JORDAN J

ART UNIT PAPER NUMBER

2667

DATE MAILED: 07/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	09/998,008		MOONEY ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Jordan Hamann		2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 6-8, 10-19, 21-28, 30 and 31 is/are rejected.
- 7) ☐ Claim(s) 4, 5, 9, 29, 32 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11-28-2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)*<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____   |

**DETAILED ACTION*****Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Figure 4 Element 210. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Figure 4 Elements 193, 293 and 201, Figure 6 Elements 12 and 22. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted

Art Unit: 2667

after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to because on page 6 line 15 Devices 10 and 20 appear to have been meant to be 11 and 21, and 10 and 20 are reference numbers in Figure 1. Similarly, on page 7 line 24 Devices 10 and 20 appear to have meant to be 12 and 22, 10 and 20 are reference numbers in Figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner,

Art Unit: 2667

the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

An application must contain a brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 6-8, 10-15, 17-19, 21-23, 25-28, 30-31 are rejected under 35

U.S.C. 102(b) as being anticipated by Goodnow et al. (US 6,141,351).

With respect to claim 1, Goodnow discloses in Figure 1 a system comprising: a bus (12); a first transmitter connected to the bus and configured to transmit a first signal over the bus in a first frequency band (18, 20, or 22); a second transmitter connected to the bus and configured to transmit a second signal over the bus in a second frequency band at the same time that the first transmitter is transmitting the first signal (18, 20, or 22); a first receiver connected to the bus and configured to receive the first signal transmitted over the bus in the first frequency band (18, 20, or 22); and a second receiver connected to the bus and configured to receive the second signal transmitted over the bus in the second frequency band (18, 20, or 22), wherein the first frequency band and the second frequency band occupy different portions of the frequency spectrum (column 3 lines 4-6).

With respect to claim 3 Goodnow discloses the system of claim 1 wherein the first transmitter includes a first encoder (Figure 2 Element 24) defining at least in part the first frequency band.

Art Unit: 2667

With respect to claim 6 Goodnow discloses the system of claim 1 wherein the first transmitter and the second receiver are part of a single chip (Figure 2 Element 24).

With respect to claim 7 Goodnow discloses the system of claim 1 wherein the first frequency band and the second frequency band are fixed (column 1 lines 64-65).

With respect to claim 8 Goodnow discloses the system of claim 1 further comprising a band setting unit configured to set the first frequency band and the second frequency band in response to an input signal (Figure 2 Element 30).

With respect to claim 10 Goodnow discloses the system of claim 8 further comprising a first arbitration module and a second arbitration module configured to arbitrate between one another to generate the input signal (Figure 2 Element 30).

With respect to claim 11 Goodnow discloses the system of claim 1 wherein the first transmitter and the second receiver are associated with a microprocessor (Figure 1 Element 18).

With respect to claim 12 Goodnow discloses the system of claim 1 wherein first transmitter and the second receiver are associated with a memory storage device (Figure 1 Element 22).

With respect to claim 13 Goodnow discloses the system of claim 1 wherein the first transmitter and the second receiver are associated with a chipset (Figure 2 Element 24).

With respect to claim 14 Goodnow discloses in Figure 1 the system of claim 1 wherein: the first transmitter includes a first output connected to the bus (20); the second transmitter includes a second output connected to the bus (20); the first receiver includes a first input connected to the bus (20); and the second receiver includes a second input connected to the bus (20).

With respect to claim 15 Goodnow discloses a microprocessor (Figure 1 Element 18) comprising: a transmitter configured to transmit a first signal over a bus in a first frequency band (Figure 2 Element 24); and a receiver configured to receive a second signal simultaneously transmitted over the bus in a second frequency band (Figure 2 Element 24) wherein the first frequency band and the second frequency band occupy different portions of the frequency spectrum (column 3 lines 4-6).

With respect to claim 17 Goodnow discloses the microprocessor of claim 15 wherein the transmitter includes a first encoder defining at least in part the first frequency band (Figure 2 Element 24 Modulation System).

With respect to claim 18 Goodnow discloses the microprocessor of claim 15 wherein the first frequency band and the second frequency band are fixed (column 1 lines 64-65).

With respect to claim 19 Goodnow discloses a memory (Figure 1 Element 22) comprising: a transmitter configured to transmit a first signal over a bus in a first frequency band (Figure 2 Element 24); and a receiver configured to receive a second signal simultaneously transmitted over the bus in a second frequency band (Figure 2 Element 24), wherein the first frequency band and the second



Art Unit: 2667

frequency band occupy different portions of the frequency spectrum (column 3 lines 4-6).

With respect to claim 21 Goodnow discloses the memory of claim 19 wherein the transmitter includes a first encoder defining at least in part the first frequency band (Figure 2 Element 24).

With respect to claim 22 Goodnow discloses the memory of claim 19 wherein the first frequency band and the second frequency band are fixed (column 1 lines 64-65).

With respect to claim 23 Goodnow discloses a chipset device (Figure 2 Element 18, 20, or 22) comprising: a transmitter configured to transmit a first signal over a bus in a first frequency band (Figure 2 Element 24); and a receiver configured to receive a second signal simultaneously transmitted over the bus in a second frequency band (Figure 2 Element 24), wherein the first frequency band and the second frequency band occupy different portions of the frequency spectrum (column 3 lines 4-6).

With respect to claim 25 Goodnow discloses the chipset device of claim 23 wherein the transmitter includes a first encoder defining at least in part the first frequency band (Figure 2 Element 24).

With respect to claim 26 Goodnow discloses the chipset device of claim 23 wherein the first frequency band and the second frequency band are fixed (column 1 lines 64-65).

With respect to claim 27 Goodnow describes in column 1 lines 59-65 and column 3 lines 4-6 a method of transmitting data within a device comprising:

Art Unit: 2667

transmitting a first signal over a bus in a first frequency band; a second signal over the bus in a second frequency band; receiving the first signal transmitted over the bus; and receiving the second signal transmitted over the bus wherein: the first frequency band and the second frequency band occupy different portions of the frequency spectrum; and transmitting the first signal, transmitting the second signal, receiving the first signal, and receiving the second signal all occur simultaneously.

With respect to claim 28 Goodnow discloses the method of claim 27 wherein transmitting the first signal includes encoding an output to form the first signal in the first frequency band (Figure 2 Element 24).

With respect to claim 30 Goodnow discloses the method of claim 27 further comprising setting a spectral band of the first frequency band and the second frequency band based upon a set signal (Figure 2 Element 30).

With respect to claim 31 Goodnow discloses the method of claim 30 further comprising generating the set signal by arbitrating between two components on the bus (Figure 2 Element 30).

Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Schneider et al. (US 4,262,171).

With respect to claim 1 Schneider discloses a system comprising: a bus (Figure 1 Element 12); a first transmitter connected to bus and configured to transmit a first signal over the bus in a first frequency band (Figure 1 Element 10 and top of Figure 2A); a second transmitter connected to the bus and configured to transmit a second signal over the bus in a second frequency band (Figure 1

Art Unit: 2667

Element 10 and top of Figure 2A) at the same time that the first transmitter is transmitting the first signal (column 2 lines 1-2); a first receiver connected to the bus and configured to receive the first signal transmitted over the bus in the first frequency band(Figure 1 Element 10 and bottom of Figure 2A); and a second receiver connected to the bus and configured to receive the second signal transmitted over the bus in the second frequency band(Figure 1 Element 10 and bottom of Figure 2A), wherein the first frequency band and the second frequency band occupy different portions of the frequency spectrum (column 4 line 10).

With respect to claim 2 Schneider discloses the system of claim 1 wherein the first transmitter includes a first filter having a first cutoff frequency defining at least in part the first frequency band (Figure 2A Elements 62 and 63).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16, 20 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodnow et al. (US 6,141,351) in view of Schneider et al. (US 4,262,171).

With respect to claim 16 Goodnow discloses the microprocessor of claim 15, see 102 rejection above. However Goodnow does not disclose expressly the

Art Unit: 2667

microprocessor of claim 15 wherein the transmitter includes a first filter having a first cutoff frequency defining at least in part the first frequency band.

Schneider discloses a transmitter including a filter having a first cutoff frequency defining at least in part the first frequency band (Figure 2A Elements 62 and 63).

Goodnow and Schneider are analogous art because they are directed to a similar problem solving area of simultaneous transmission on a bus by frequency division multiplexing.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to place the filter of Schneider on the transmitter of Goodnow to define in part the first frequency band. The motivation for doing so would have been to define the first frequency band so that a second signal could be sent in a second frequency band at the same time and the two signals would not interfere with one another.

With respect to claim 20 Goodnow does disclose the memory of claim 19, see 102 rejection above. However Goodnow does not disclose expressly the memory of claim 19 wherein the transmitter includes a first filter having a first cutoff frequency defining at least in part the first frequency band.

Schneider discloses a transmitter including a filter having a first cutoff frequency defining at least in part the first frequency band (Figure 2A Elements 62 and 63).

Art Unit: 2667

Goodnow and Schneider are analogous art because they are directed to a similar problem solving area of simultaneous transmission on a bus by frequency division multiplexing.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to place the filter of Schneider on the transmitter of Goodnow to define in part the first frequency band. The motivation for doing so would have been to define the first frequency band so that a second signal could be sent in a second frequency band at the same time and the two signals would not interfere with one another.

With respect to claim 24 Goodnow discloses the chipset device of claim 23, see 102 rejection above. However Goodnow does not disclose expressly the chipset device of claim 23 wherein the transmitter includes a first filter having a first cutoff frequency defining at least in part the first frequency band.

Schneider discloses a transmitter including a filter having a first cutoff frequency defining at least in part the first frequency band (Figure 2A Elements 62 and 63).

Goodnow and Schneider are analogous art because they are directed to a similar problem solving area of simultaneous transmission on a bus by frequency division multiplexing.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to place the filter of Schneider on the transmitter of Goodnow to define in part the first frequency band. The motivation for doing so would have been to define the first frequency band so that a second signal could

Art Unit: 2667

be sent in a second frequency band at the same time and the two signals would not interfere with one another.

***Allowable Subject Matter***

Claims 4, 5, 9, 29, 32 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jordan Hamann whose telephone number is (571) 272-8564. The examiner can normally be reached on Monday-Friday 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2667

JJH



CHI PHAM  
SUPERVISORY PATENT EXAMINE  
TECHNOLOGY CENTER 2667

7/12/05